

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	UNCONVENTIONAL MATERIALS PROCESSING PROCESSES(1)					Discipline code	3 IPM 14		
Course type ²	DS	Category ³	DO	Year of study	3	Semester	6	Number of credit points	2

Faculty	Material Science and Engineering					Number of teaching and learning hours ⁴					
Field	Materials Engineering					Total	L	T	LB	P	IS
Specialization	IPM					50	28	-	14	-	8

Pre-requisites from the curriculum ⁵	Compulsory	
	Recommended	Chemistry, Physics

General objective ⁶	Study controlled atmospheres used in heat treatment and thermochemical, as environmental protection and the environment with active components.
Specific objectives ⁷	Knowledge, analysis, design and efficient used and effective and appropriate use of heat treatments and thermochemical technologies used in machinery industry.
Course description ⁸	I. Classification and choice of heating media. II. Heat transfer in medium heat. III. Mass transfer. IV. Thermodynamic potential at heating environments. V. Gaseous medium for heating (controlled atmosphere). VI. Liquid medium for heating. VII. Solid medium for heating. VIII. Combinate medium. Heating in fluidized bed. IX. Special medium. Ion nitriding.

Assessment		Schedule ⁹		Percentage of the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ COLOCVIU	Class tests along the semester 1			50 % (minimum 5)
	Home works			
	Other activities	%	week	
	Examination procedures and conditions: 1. -, working conditions Oral , percent 100 %;	100 % (minimum 5)	week 14	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			50 % (minimum 5)
D. Project	Activity during project			% (minimum 5)
Course organizer	Lecturer Ph.D. Eng. Achitei Dragoş			
Teaching assistants	Lecturer Ph.D. Eng. Achitei Dragoş			

¹Course name from the curriculum

² DF – fundamental, DD – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium